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#### 1 [Efficient management for large-scale flash-memory storage systems with resource conservation](#)

[Li-Pin Chang](#), [Tei-Wei Kuo](#)

November 2005 **Transactions on Storage (TOS)** , Volume 1 Issue 4

**Publisher:** ACM

Full text available: Pdf (1.45 MB)

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**Bibliometrics:** Downloads (6 Weeks): 28, Downloads (12 Months): 268, Citation Count: 8

Many existing approaches on flash-memory management are based on RAM-resident tables in which one single granularity size is used for both address translation and space management. As high-capacity flash memory is becoming more affordable than ever, ...

**Keywords:** Flash memory, consumer electronics, embedded systems, memory management, portable devices, storage systems

#### 2 [Automated reduction of the memory footprint of the Linux kernel](#)

[Dominique Charet](#), [Bjorn De Sutter](#), [Bruno De Bus](#), [Ludo Van Put](#), [Koen De Bosschere](#)

September 2007 **Transactions on Embedded Computing Systems (TECS)** , Volume 6 Issue 4

**Publisher:** ACM

Full text available: Pdf (1.43 MB)

Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

**Bibliometrics:** Downloads (6 Weeks): 18, Downloads (12 Months): 243, Citation Count: 1

The limited built-in configurability of Linux can lead to expensive code size overhead when it is used in the embedded market. To overcome this problem, we propose the application of link-time compaction and specialization techniques that exploit the ...

**Keywords:** Linux kernel, compaction, compression, operating system, specialization, system calls

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### 3 [Algorithms and data structures for flash memories](#)



[Eran Gal](#), [Sivan Toledo](#)

June 2005 **Computing Surveys (CSUR)** , Volume 37 Issue 2

**Publisher:** ACM

Full text available: [Pdf](#) (343.39 KB)

Additional Information: [full citation](#), [abstract](#), [references](#), [cited by](#), [index terms](#)

**Bibliometrics:** Downloads (6 Weeks): 101, Downloads (12 Months): 832, Citation Count: 23

Flash memory is a type of electrically-erasable programmable read-only memory (EEPROM). Because flash memories are nonvolatile and relatively dense, they are now used to store files and other persistent objects in handheld computers, mobile phones, digital ...

**Keywords:** EEPROM memory, Flash memory, wear leveling

### 4 [Exterminator: Automatically correcting memory errors with high probability](#)



[Gene Novark](#), [Emery D. Berger](#), [Benjamin G. Zorn](#)

December 2008 **Communications of the ACM** , Volume 51 Issue 12

**Publisher:** ACM

Full text available: [Digital Edition](#) , [Html](#) (869.00 bytes), [Pdf](#) (840.78 KB)

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**Bibliometrics:** Downloads (6 Weeks): 21, Downloads (12 Months): 172, Citation Count: 0

Programs written in C and C++ are susceptible to memory errors, including buffer overflows and dangling pointers. These errors, which can lead to crashes, erroneous execution, and security vulnerabilities, are notoriously costly to repair. Tracking down ...

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